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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,105	09/24/2003	Eit Drent	TS1102 (US)	8177

23632 7590 08/25/2006

SHELL OIL COMPANY
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HOUSTON, TX 772522463

EXAMINER

LAO, MARIALOUIA

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,105

Applicant(s)

DRENT ET AL.

Examiner

MLouisa Lao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-26 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Acknowledgement of Receipt of Papers

1. The examiner acknowledges receipt of all papers submitted after the filing date of January 20, 2006, which include the Oath dated 3/14/2006.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-20, drawn to process for the hydroformylation of an optionally substituted ethylenically unsaturated compound, classified in class 568, subclass 454.
- II. Claims 21 and 25, drawn to a diphosphine ligand having the general formula (II) and a catalyst comprising Group VIII metal cations and the diphosphine ligand having the general formula (II), classified in class 568, subclass 454.
- III. Claims 22 and 26, drawn to a diphosphine ligand having the general formula (III) and a catalyst comprising Group VIII metal cations and the diphosphine ligand having the general formula (III), classified in class 568, subclass 454.
- IV. Claims 23 and 24, drawn to a diphosphine ligand having the general formula (IV) and a catalyst comprising Group VIII metal cations and the diphosphine ligand having the general formula (IV), classified in class 568, subclass 454.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and (II, III, IV) are related as process of making and (reactants and catalysts) in the hydroformylation process. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the (reactant and catalyst) as claimed can be utilized by another and materially different process (MPEP § 806.05(f)). In the instant case, the diphosphine ligand and the catalyst comprising the diphosphine ligand, with carbon monoxide and hydrogen, can be used in other asymmetric processes, such as asymmetric hydrogenation reactions, asymmetric hydrosilation reactions and asymmetric isomerization reactions.

3. Inventions II to IV are related as reactants and catalysts in the hydroformylation process that share a disclosed common utility linked to a substantial structural feature. The reactants and products in this relationship are distinct if either or both of the following can be shown: (1) that the reactants and catalysts encompass embodiments that are NOT required to perform the common utility or (2) that the reactants and catalysts as claimed encompass embodiments that are NOT required to have the substantial structural feature. In this case, there are four different diphosphine ligands and the catalysts comprising the corresponding different diphosphine ligands. The substantial structural feature lies with the different diphosphine ligands, where each has a different bivalent optionally substituted bridging group. Some hydroformylation

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processes do not entail this substantial structural feature; since the catalysts can comprise a bidentate ligand that has arsenic or antimony, other than phosphorus and the bridging group can be unsubstituted or substituted aliphatic groups, other than an optionally substituted phospho-bicycloalkyl group.

Election of Species

4. This application contains claims directed to the following patentably distinct species: four diphosphine ligands and the catalysts comprising the corresponding diphosphine ligands. The species are independent or distinct because of the reasons stated earlier.

The search for all inventions would place an undue burden on the Office in view of the diversity of the art. Because these inventions are independent or distinct for the reasons given above and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, structure I is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims

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readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Due to the complexity of the art, a telephone call was not made to the applicant's representative to request an oral election to the above restriction requirement. See M.P.E.P. Sec 812.01.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103 (a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MLouisa Lao whose telephone number is 571-272-9930. The examiner can normally be reached on 8:30am to 5:30pm Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER
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